Claims Amended May 2001 for Application Serial No. 08/903,944

Clean Version of Amended Claims

6. (Three Times Amended) A method for producing transgenic poinsettia plants, comprising:

(a) incubating poinsettia plant tissue explants that produce reddish epidermal callus on auxin- and cytokinin-containing callus induction medium;

(b) culturing reddish epidermal callus on embryo induction medium comprising casein hydrolysate and NH_4^+ and/or NO_3^- to form embryogenic callus;

(c)

(i) introducing an expression vector into said incubating embryogenic callus to produce transformed embryogenic callus, wherein said expression vector comprises a selectable marker gene and a second foreign gene, or

(ii) introducing two expression vectors into said incubating embryogenic callus to produce transformed embryogenic callus, wherein one of said expression vectors comprises a selectable marker gene, and wherein the second of said expression vectors comprises a second foreign gene; wherein the vector or vectors are introduced into the incubating embryogenic callus by co-incubating the callus with Agrobacterium tumefaciens containing the vector or vectors or by microprojectile-mediated delivery of the vector into the callus;

(d) culturing said transformed embryogenic callus on selection medium;

(e) culturing said transformed embryogenic callus containing embryos on developmental medium containing an osmotic pressure increasing agent;

(f) culturing said transgenic embryos on maturation medium; and

(g) recovering transgenic plants from said transgenic embryos.

39. (Four Times Amended) A method for producing transgenic poinsettia plants, comprising:

(a) incubating poinsettia plant tissue explants that produce reddish epidermal callus in auxin- and cytokinin-containing callus induction medium;

(b) subculturing embryogenic callus produced on said callus induction medium to liquid NH_4^+ and/or NO_3^- containing embryo induction medium;

(c) filtering the culture and culturing the filtrate in fresh liquid embryo induction medium;

(d) filtering the culture and culturing the filtrate on solid embryo induction medium;

(e) subculturing embryos produced on said embryo induction medium to maturation medium;

(f) culturing said embryos on callus induction medium;

(g) culturing epidermal callus produced on said callus induction medium on embryo induction medium to form embryogenic callus;

(h)

(i) introducing an expression vector into said embryogenic callus to produce transformed embryogenic callus, wherein said expression vector comprises a selectable marker gene and a second foreign gene, or

(ii) introducing two expression vectors into said embryogenic callus to produce transformed embryogenic callus, wherein one of said expression vectors comprises a selectable marker gene, and wherein the second of said expression vectors comprises a second foreign gene; wherein the vector or vectors are introduced into the incubating embryogenic callus by

co-incubating the callus with Agrobacterium tumefaciens containing the vector or vectors or by microprojectile-mediated delivery of the vector into the callus;

(i) culturing said transformed embryogenic callus on selection medium;

(j) culturing said transformed embryogenic callus containing embryos on developmental medium containing an osmotic pressure increasing agent;

(k) culturing said transformed embryos on maturation medium; and

(l) recovering transgenic plants from said transgenic embryos.

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103. (Amended) A method for producing transgenic poinsettia plants comprising the steps of:

(a) incubating poinsettia plant tissue explants that produce epidermal callus on auxin- and cytokinin-containing callus induction medium;

(b) subculturing embryogenic callus produced on said callus induction medium to liquid embryo induction medium comprising casein hydrolysate and NH_4^+ and/or NO_3^-;

(c) filtering the culture and culturing the filtrate in fresh liquid embryo induction medium;

(d) filtering the culture and culturing the filtrate on solid embryo induction medium;

(e) subculturing embryos produced on said embryo induction medium to maturation medium;

(f) culturing said embryos on callus induction medium;

(g) culturing embryogenic callus produced on said callus induction medium on embryo induction medium to form embryogenic callus containing embryos;

(h)

(i) introducing an expression vector into said incubating embryogenic callus to produce transformed embryogenic callus, wherein said expression vector comprises a selectable marker gene and a second foreign gene, or

(ii) introducing two expression vectors into said incubating embryogenic callus to produce transformed embryogenic callus, wherein one of said expression vectors comprises a selectable marker gene, and wherein the second of said expression vectors comprises a second foreign gene;

(i) culturing said transformed embryogenic callus on selection medium;

(j) culturing said transformed embryogenic callus containing embryos on developmental medium containing an osmotic pressure increasing agent;

(k) culturing said transformed embryos on maturation medium; and

(l) recovering transgenic plants from said transgenic embryos.